

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (Previously Presented) A semiconductor laser device having a quantum well active layer disposed between a pair of cladding layers, and an optical guide layer disposed between at least one of the cladding layers and the quantum well active layer,

wherein a spacer layer is provided between said optical guide layer and said at least one of the cladding layers, said spacer layer having an interface between the spacer layer and said optical guide layer, and

wherein said optical guide layer has a thickness of 30nm or 35 nm.

2. (Original) A semiconductor laser device according to claim 1, wherein said spacer layer is formed between the optical guide layer and a p-type cladding layer, and has a thickness of 5 nm or more but below 10 nm.

3. (Original) A semiconductor laser device according to claim 2, wherein said p-type cladding layer has a carrier concentration in a range of from  $8 \times 10^{17} \text{ cm}^{-3}$  to  $5 \times 10^{18} \text{ cm}^{-3}$ .

4. (Previously Presented) A semiconductor laser device according to claim 2, wherein said spacer layer has a p-type electrical conductivity, and a carrier concentration at said interface between said spacer layer and said optical guide layer is more than  $5 \times 10^{16} \text{ cm}^{-3}$  and less than  $5 \times 10^{17} \text{ cm}^{-3}$ .

5. (Original) A semiconductor laser device according to claim 2, wherein said spacer layer has a composition identical to that of said p-type cladding layer or is larger than said p-type cladding layer in a band gap.

6. (Canceled).

7. (Canceled).

8. (Canceled).

9. (Previously Presented) The semiconductor laser device of claim 1, further comprising a second optical guide layer is disposed between a lower one of said pair of cladding layers and said quantum well active layer.

10. (Previously Presented) The semiconductor laser device of claim 9, further comprising a buffer layer below said lower one of said pair of cladding layers.

11. (Canceled)

12. (Previously Presented) The semiconductor laser device of claim 1, wherein said quantum well active layer comprises an undoped multi-quantum well layer having two to four well layers alternating with optical barrier layers.

13. (Previously Presented) The semiconductor laser device of claim 12, wherein each of said well layers has a thickness of 8nm and each of said optical barrier layers have a thickness of 5nm.

14. (Previously Presented) The semiconductor laser device of claim 12, wherein each of said well layers has a thickness of 7nm and each of said optical barrier layers have a thickness of 8nm.

15. (Previously Presented) The semiconductor laser device of claim 12, wherein each of said well layers has a thickness of 7nm and each of said optical barrier layers have a thickness of 20nm.

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16-21. (Canceled).

22. (Currently Amended) A semiconductor laser device having a quantum well active layer disposed between a pair of cladding layers, and an optical guide layer disposed between at least one of the cladding layers and the quantum well active layer,

wherein said ~~a~~ spacer layer is formed between said optical guide layer and a p-type cladding layer, and

wherein said spacer layer has a p-type electrical conductivity, and a carrier concentration at an interface between said spacer layer and said optical guide layer is more than  $5 \times 10^{16} \text{ cm}^{-3}$  and less than  $5 \times 10^{17} \text{ cm}^{-3}$ .

23. (Previously Presented) A semiconductor laser device having a quantum well active layer disposed between a pair of cladding layers and an optical guide layer disposed between at least one of the cladding layers and the quantum well active layer, wherein

a spacer layer consisting of a single layer of a thickness of 5 nm or more but below 10 nm is disposed between the optical guide layer and a p-type cladding layer, the spacer layer being in contact with both the optical guide layer and the p-type cladding layer.

24. (Previously Presented) A semiconductor laser device according to claim 23, wherein said spacer layer has a p-type electrical conductivity, and a carrier concentration at an interface between said spacer layer and said optical guide layer is more than  $5 \times 10^{16} \text{ cm}^{-3}$  but less than  $5 \times 10^{17} \text{ cm}^{-3}$ .

25. (Previously Presented) A semiconductor laser device having a quantum well active layer disposed between a pair of cladding layers and an optical guide layer

disposed between at least one of the cladding layers and the quantum well active layer,

wherein

a spacer layer consisting of a single layer and having a p-type electrical conductivity is disposed between the optical guide layer and a p-type cladding layer, the spacer layer being in contact with both the optical guide layer and the p-type cladding layer, and a carrier concentration at an interface between the spacer layer and the optical guide layer is more than  $5 \times 10^{16} \text{ cm}^{-3}$  but less than  $5 \times 10^{17} \text{ cm}^{-3}$ .

26. (Previously Presented) A semiconductor laser device according to claim 23, wherein said p-type cladding layer has a carrier concentration in a range of from  $8 \times 10^{17} \text{ cm}^{-3}$  to  $5 \times 10^{18} \text{ cm}^{-3}$ .

27. (Previously Presented) A semiconductor laser device according to claim 25, wherein said p-type cladding layer has a carrier concentration in a range of from  $8 \times 10^{17} \text{ cm}^{-3}$  to  $5 \times 10^{18} \text{ cm}^{-3}$ .

28. (Previously Presented) A semiconductor laser device according to claims 23, wherein said spacer layer has a composition identical to that of said p-type cladding layer or is larger than said p-type cladding layer in band gap.

29. (Previously Presented) A semiconductor laser device according to claims 25, wherein said spacer layer has a composition identical to that of said p-type cladding layer or is larger than said p-type cladding layer in band gap.

30-31 (Canceled).